# This Page Is Inserted by IFW Operations and is not a part of the Official Record

# **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

09/777,430



FILE 'HOME' ENTERED AT 08:46:20 ON 24 SEP 2003

=> file biosis medline caplus wpids uspatfull

COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.21 0.21

FULL ESTIMATED COST

FILE 'BIOSIS' ENTERED AT 08:46:41 ON 24 SEP 2003 COPYRIGHT (C) 2003 BIOLOGICAL ABSTRACTS INC.(R)

FILE 'MEDLINE' ENTERED AT 08:46:41 ON 24 SEP 2003

FILE 'CAPLUS' ENTERED AT 08:46:41 ON 24 SEP 2003 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIDS' ENTERED AT 08:46:41 ON 24 SEP 2003 COPYRIGHT (C) 2003 THOMSON DERWENT

FILE 'USPATFULL' ENTERED AT 08:46:41 ON 24 SEP 2003 CA INDEXING COPYRIGHT (C) 2003 AMERICAN CHEMICAL SOCIETY (ACS)

\*\*\* YOU HAVE NEW MAIL \*\*\*

=> s positiv? (4a) phosphoramidite
L1 2 POSITIV? (4A) PHOSPHORAMIDITE

=> s l1 and ammonium

L2 2 L1 AND AMMONIUM

=> d 12 bib abs 1-2

L2 ANSWER 1 OF 2 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN

AN 2002-674850 [72] WPIDS

CR 1997-393613 [36]; 1998-322748 [28]; 1998-557036 [47]; 2002-083110 [11]; 2002-750464 [81]

DNC C2002-190055

TI Composition useful for e.g. separation of nucleic acids comprises a **positively** or neutrally charged **phosphoramidite**.

DC B04 B05 D16

IN ALLAWI, H T; LYAMICHEV, V; NERI, B P; SKRZPCZYNSKI, Z; TAKOVA, T; WAYLAND, S R

PA (THIR-N) THIRD WAVE TECHNOLOGIES INC

CYC 100

PI WO 2002063030 A2 20020815 (200272)\* EN 197p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZM ZW

W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

US 2002128465 A1 20020912 (200272)

ADT WO 2002063030 A2 WO 2002-US3423 20020206; US 2002128465 A1 CIP of US 1996-682853 19960712, CIP of US 1999-333145 19990614, US 2001-777430 20010206

FDT US 2002128465 A1 CIP of US 6001567

PRAI US 2001-777430 20010206; US 1996-682853 19960712; US 1999-333145

AN 2002-674850 [72] WPIDS

```
CR 1997-393613 [36]; 1998-322748 [28]; 1998-557036 [47]; 2002-083110 [11]; 2002-750464 [81]
```

AB WO 200263030 A UPAB: 20030828

NOVELTY - Composition comprises a **positively** or neutrally charged **phosphoramidite**.

DETAILED DESCRIPTION - Composition (c) or (c') comprises a positively charged phosphoramidite of formula (I) or a neutrally charged phosphoramidite of formula (II). (I) comprises nitrogen-containing chemical group selected from primary, secondary or tertiary amine or ammonium group. (II) comprises secondary or tertiary amine or ammonium group.

X, Z = a reactive phosphate group;

Y = a protected hydroxy group;

X' = a protected hydroxy group;

N, N' = an amine group.

INDEPENDENT CLAIMS are included for the following:

- (1) a composition (c1) comprising a charge tag (x1) attached to a terminal end of a nucleic acid molecule, the charge tag comprises a phosphate group and a positively charged molecule;
- (2) a composition (c2) comprising a nucleic acid molecule that comprises a **positively** charged **phosphoramidite**;
- (3) a composition (c3) comprising a charge tag attached to the terminal end of a nucleic acid molecule, the charge tag comprises a positively charged phosphoramidite;
- (4) a composition (c4) comprising a fluorescent dye directly bonded to a phosphate group, which is not directly bonded to an amine group;
- (5) a mixture (m) comprising a number of oligonucleotides, each oligonucleotide is attached to a different charge tag with each charge tag comprising a phosphate group and a positively charged group;
- (6) a composition (c5) comprising a solid support attached to a charged tag, the charge tag comprises a positively charged group and a reactive group configured to allow the charge tag to covalently attach to the nucleic acid molecule;
  - (7) separating nucleic acid molecules involving either:
- (a) treating (m1) a charge-balanced oligonucleotide containing the charge tag to produce a charge-unbalanced oligonucleotide and separating the charge-unbalanced oligonucleotide from the reaction mixture; or
- (b) treating (m2) a number of charge-balanced oligonucleotides, each containing different charge tags, to produce at least 2 charge-unbalanced oligonucleotides, and separating the charge-unbalanced oligonucleotides from the reaction mixture.
- USE The composition is useful for separation of nucleic acid molecules (claimed). The composition is further useful for fractionation of specific nucleic acids by selective charge reversal useful in e.g. INVADER assay cleavage reactions; and in the synthesis of charge-balanced molecules.

ADVANTAGE - In the fractionation of nucleic acid molecules, the method provides an absolute readout of the partition of products from substrates (i.e. provides a 100% separation). Through the use of multiple positively charged adducts, synthetic molecules can be constructed with sufficient modification due to the fact that the normally negatively charged strand is made nearly neutral. It is also possible to distinguish between a enzymatically or thermally degraded DNA fragments due to the absence or presence of 3'phosphate.

Dwg.0/46

```
L2 ANSWER 2 OF 2 USPATFULL on STN
```

2002:236261 USPATFULL

AN

IN

TI Charge tags and the separation of nucleic acid molecules

Lyamichev, Victor, Madison, WI, UNITED STATES Skrzpczynski, Zbigniew, Verona, WI, UNITED STATES Allawi, Hatim T., Madison, WI, UNITED STATES

Wayland, Sarah R., Madison, WI, UNITED STATES Takova, Tsetska, Madison, WI, UNITED STATES Neri, Bruce P., Madison, WI, UNITED STATES

PA Third Wave Technologies, Inc. (U.S. corporation)

PI US 2002128465 A1 20020912

AI US 2001-777430 A1 20010206 (9)

RLI Continuation-in-part of Ser. No. US 1999-333145, filed on 14 Jun 1999, PENDING Continuation-in-part of Ser. No. US 1996-682853, filed on 12 Jul 1996, GRANTED, Pat. No. US 6001567

DT Utility

FS APPLICATION

LREP MEDLEN & CARROLL, LLP, 101 HOWARD STREET, SUITE 350, SAN FRANCISCO, CA, 94105

CLMN Number of Claims: 86 ECL Exemplary Claim: 1 DRWN 46 Drawing Page(s)

LN.CNT 5163

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The present invention relates to novel phosphoramidites, including positive and neutrally charged compounds. The present invention also provides charge tags for attachment to materials including solid supports and nucleic acids, wherein the charge tags increase or decrease the net charge of the material. The present invention further provides methods for separating and characterizing molecules based on the charge differentials between modified and unmodified materials.

```
=> s positiv? (4a) phosph?
          9943 POSITIV? (4A) PHOSPH?
=> s 13 and plurality oligo?
             0 L3 AND PLURALITY OLIGO?
=> s 13 and plural? (4a) oligo?
            30 L3 AND PLURAL? (4A) OLIGO?
=> s 15 and different
            27 L5 AND DIFFERENT
=> dup rem 16
PROCESSING COMPLETED FOR L6
             27 DUP REM L6 (0 DUPLICATES REMOVED)
=> d 17 bib abs 1-27
     ANSWER 1 OF 27 USPATFULL on STN
L7
       2003:237686 USPATFULL
AN
       Oligonucleotide library for detecting RNA transcripts and splice
TI
       variants that populate a transcriptome
       Shoshan, Avi, New York, NY, UNITED STATES
IN
       Wasserman, Alon, New York, NY, UNITED STATES
       Mintz, Eli, Kendall Park, NJ, UNITED STATES
       Mintz, Liat, Kendall Park, NJ, UNITED STATES
       Faigler, Simchon, Edison, NJ, UNITED STATES
PΙ
       US 2003165843
                         A1
                               20030904
ΑI
       US 2001-908975
                          A1
                               20010720 (9)
PRAI
       US 2001-287724P
                           20010502 (60)
       US 2000-221607P
                           20000728 (60)
DT
       Utility
       APPLICATION
FS
       Sol Sheinbein, G E EHRLICH (1995) LTD, C/O Anthony Castorina, 2001
LREP
       Jefferson Davis Highway Suite 207, Arlington, VA, 22202
CLMN
       Number of Claims: 60
ECL
       Exemplary Claim: 1
       3 Drawing Page(s)
DRWN
LN.CNT 1248
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
ΔR
       The present invention provides oligonucleotide libraries capable of
       detecting RNA transcripts and RNA splice variants which populate a
       transcriptome and which are transcribed from genes or transcription
       units that populate the corresponding genome. The present invention also
       provides oligonucleotide arrays generated from the oligonucleotide
       libraries and methods of using the oligonucleotide libraries in various
       oligonucleotide detection systems and expression profiling studies.
       Antisense molecules and double-stranded interfering RNAs, which are
       types of oligonucleotides, based on the oligonucleotides disclosed
       herein also are provided.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 2 OF 27 USPATFULL on STN
       2003:207309 USPATFULL
AΝ
TΙ
       Repeat sequences of the CA125 gene and their use for diagnostic and
       therapeutic interventions
       O'Brien, Timothy J., Little Rock, AR, UNITED STATES
IN
       Beard, John B., Little Rock, AR, UNITED STATES
       Underwood, Lowell J., Little Rock, AR, UNITED STATES
PΤ
       US 2003143667
                         A1
                               20030731
```

```
A1
       US 2001-965738
                               20010927 (9)
ΑI
                         20010417 (60)
PRAI
       US 2001-284175P
       US 2001-299380P
                           20010619 (60)
DT
       Utility
       APPLICATION
FS
       Butler, Snow, O'Mara, Stevens & Cannada, PLLC, 6075 Poplar Avenue, Suite
LREP
       500, P.O. Box 171443, Memphis, TN, 38119
       Number of Claims: 34
CLMN
ECL
       Exemplary Claim: 1
DRWN
       17 Drawing Page(s)
LN.CNT 12149
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The CA125 gene has been cloned and multiple repeat sequences as well as
AB
       the carboxy terminus have been identified. The CA125 molecule comprises
       three major domains: an extracellular amino terminal domain (Domain 1);
       a large multiple repeat domain (Domain 2); and a carboxy terminal domain
       (Domain 3) which includes a transmembrane anchor with a short
       cytoplasmic domain. The amino terminal domain is assembled by combining
       five genomic exons, four very short amino terminal sequences and one
       extraordinarily large exon. This domain is dominated by its capacity for
       O-glycosylation and its resultant richness in serine and threonine
       residues. The molecular structure is dominated by a repeat domain
       comprising 156 amino acid repeat units, which encompass the epitope
       binding sites. More than 60 repeat units have been identified,
       sequenced, and contiguously placed in the CA125 domain structure. The
       repeat units encompass an interactive disulfide bridged C-enclosure and
       the site of OC125 and M11 binding. The repeat sequences demonstrated
       70-85% homology to each other. Expression of the repeats was
       demonstrated in E. coli. The CA125 molecule is anchored at its carboxy
       terminal through a transmembrane domain and a short cytoplasmic tail.
       The carboxy terminal also contains a proteolytic cleavage site
       approximately 50 amino acids upstream from the transmembrane domain,
       which allows for proteolytic cleavage and release of the CA125 molecule.
       Any one of the repeat domains has the potential for use as a new gold
       standard for detecting and monitoring the presence of the CA125 antigen.
       Further, the repeat domains or other domains, especially the c-terminal
       to the repeat domain also provide a basis for the development of a
       vaccine, which would be useful for the treatment of ovarian cancer and
       other carcinomas where CA125 is elevated.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 3 OF 27 USPATFULL on STN
AN
       2003:194466 USPATFULL
TΙ
       Method and sequences for determinate nucleic acid hybridization
IN
       Hillis, William Daniel, Toluca Lake, CA, UNITED STATES
       US 2003134277
PΙ
                       A1
                               20030717
       US 2001-821694
AΙ
                          A1
                               20010328 (9)
DT
       Utility
       APPLICATION
FS
LREP
       REED & ASSOCIATES, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025
       Number of Claims: 114
CLMN
ECL
       Exemplary Claim: 1
DRWN
       2 Drawing Page(s)
LN.CNT 1529
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
```

AB Provided are methods for using nucleic acid sequences having two or more degenerately pairing nucleotides, each degenerate nucleotide having a partially overlapping set of complementarity, to reduce the number of hybridizing nucleotide sequences or probes used in biochemical and molecular biological operations having sequence specific hybridization. The method may be employed for various hybridization procedures with

sequence specific hybridization, including sequencing methods measuring hybridization directly, and tagging by hybridization methods in which the sequence is determined by analyzing the pattern of tags that hybridize thereto, and hybridization dependent amplification methods. The method involves hybridizing to the nucleic acid sequence of interest a first hybridizing nucleotide sequence and a second hybridizing nucleotide sequence, each comprising a sequence complementary, or complementary except at a position of interest or variable position, to a nucleic acid sequence of interest, and analyzing the whether some, all or none of the probes or tags hybridize.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L7
     ANSWER 4 OF 27 USPATFULL on STN
       2003:173177 USPATFULL
AN
ΤI
       Capture compounds, collections thereof and methods for analyzing the
       proteome and complex compositions
IN
       Koster, Hubert, La Jolla, CA, UNITED STATES
       Siddiqi, Suhaib, Oceanside, CA, UNITED STATES
       Little, Daniel P., Winchester, MA, UNITED STATES
PΙ
       US 2003119021
                          A1
                               20030626
                               20020716 (10)
ΑI
       US 2002-197954
                          A1
PRAI
       US 2001-306019P
                          20010716 (60)
                           20010821 (60)
       US 2001-314123P
                           20020311 (60)
       US 2002-363433P
DT
       Utility
       APPLICATION
FS
LREP
       STEPHANIE SEIDMAN, HELLER EHRMAN WHITE & MCAULIFFE LLP, 7th FL., 4350 LA
       JOLLA VILLAGE DRIVE, SAN DIEGO, CA, 92122-1246
CLMN
       Number of Claims: 125
ECL
       Exemplary Claim: 1
DRWN
       70 Drawing Page(s)
LN.CNT 6373
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Capture compounds and collections thereof and methods using the
       compounds for the analysis of biomolecules are provided. In particular,
       collections, compounds and methods are provided for analyzing complex
```

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 5 OF 27 USPATFULL on STN

methods also provided.

- AN 2003:134031 USPATFULL
- TI Novel nucleic acid sequences encoding adenylate kinase, phospholipid scramblase-like, DNA fragmentation factor-like, phosphatidylserine synthase-like, and ATPase-like molecules and uses therefor

protein mixtures, such as the proteome. The compounds are

multifunctional reagents that provide for the separation and isolation of complex protein mixtures. Automated systems for performing the

- IN Chun, Miyoung, Belmont, MA, UNITED STATES
  Glucksmann, Maria Alexandra, Lexington, MA, UNITED STATES
  Kapeller-Libermann, Rosana, Chestnut Hill, MA, UNITED STATES
  Meyers, Rachel E., Newton, MA, UNITED STATES
- PA Millennium Pharmaceuticals, Inc. (U.S. corporation)
- PI US 2003092116 A1 20030515
- AI US 2002-165800 A1 20020607 (10)
- RLI Continuation-in-part of Ser. No. US 2001-781677, filed on 12 Feb 2001, PENDING Continuation-in-part of Ser. No. US 2001-795038, filed on 26 Feb 2001, PENDING Continuation-in-part of Ser. No. US 2001-790180, filed on 21 Feb 2001, PENDING Continuation-in-part of Ser. No. US 2001-790838, filed on 22 Feb 2001, GRANTED, Pat. No. US 6489152 Continuation-in-part of Ser. No. US 2001-790179, filed on 21 Feb 2001, GRANTED, Pat. No. US

```
6479268
PRAI
       US 2000-181705P
                           20000210 (60)
       US 2000-186234P
                           20000229 (60)
       US 2000-185947P
                           20000229 (60)
       US 2000-185946P
                           20000229 (60)
       US 2000-185609P
                           20000229 (60)
DT
       Utility
       APPLICATION
FS
       ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE
LREP
       4000, CHARLOTTE, NC, 28280-4000
CLMN
       Number of Claims: 22
ECL
       Exemplary Claim: 1
DRWN
       43 Drawing Page(s)
LN.CNT 18760
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       The invention provides isolated nucleic acids molecules that encode
       novel polypeptides. The invention also provides antisense nucleic acid
       molecules, recombinant expression vectors containing the nucleic acid
       molecules of the invention, host cells into which the expression vectors
       have been introduced, and nonhuman transgenic animals in which a
       sequence of the invention has been introduced or disrupted. The
       invention still further provides isolated proteins, fusion proteins,
       antiqenic peptides and antibodies. Diagnostic methods utilizing
       compositions of the invention are also provided.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 6 OF 27 USPATFULL on STN
AN
       2003:106233 USPATFULL
ΤТ
       Compositions and methods for the therapy and diagnosis of pancreatic
       cancer
       Benson, Darin R., Seattle, WA, UNITED STATES
TN
       Kalos, Michael D., Seattle, WA, UNITED STATES
       Lodes, Michael J., Seattle, WA, UNITED STATES
       Persing, David H., Redmond, WA, UNITED STATES
       Hepler, William T., Seattle, WA, UNITED STATES
       Jiang, Yuqiu, Kent, WA, UNITED STATES
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PA
PΙ
       US 2003073144
                          A1
                               20030417
       US 2002-60036
                               20020130 (10)
ΑI
                          Α1
       US 2001-333626P
PRAT
                           20011127 (60)
       US 2001-305484P
                           20010712 (60)
       US 2001-265305P
                           20010130 (60)
       US 2001-267568P
                           20010209 (60)
       US 2001-313999P
                           20010820 (60)
                           20010516 (60)
       US 2001-291631P
       US 2001-287112P
                           20010428 (60)
                           20010321 (60)
       US 2001-278651P
       US 2001-265682P
                           20010131 (60)
DT
       Utility
FS
       APPLICATION
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
LREP
       SEATTLE, WA, 98104-7092
       Number of Claims: 17
CLMN
ECL
       Exemplary Claim: 1
DRWN
       No Drawings
LN.CNT 14253
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Compositions and methods for the therapy and diagnosis of cancer,
AB
       particularly pancreatic cancer, are disclosed. Illustrative compositions
       comprise one or more pancreatic tumor polypeptides, immunogenic portions
```

thereof, polynucleotides that encode such polypeptides, antigen

presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly pancreatic cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L7
     ANSWER 7 OF 27 USPATFULL on STN
       2003:70059 USPATFULL
AN
ΤI
       High-throughput biomolecular crystallization and biomolecular crystal
TN
       Mutz, Mitchell W., Palo Alto, CA, UNITED STATES
       Ellson, Richard N., Palo Alto, CA, UNITED STATES
       Stearns, Richard G., Felton, CA, UNITED STATES
                         A1
                               20030313
PΙ
       US 2003048341
ΑI
       US 2001-765947
                          A1
                               20010119 (9)
       Continuation-in-part of Ser. No. US 2000-727392, filed on 29 Nov 2000,
RLI
       ABANDONED Continuation-in-part of Ser. No. US 2000-669996, filed on 25
       Sep 2000, ABANDONED
       Utility
DT
       APPLICATION
FS
       REED & ASSOCIATES, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025
LREP
CLMN
      Number of Claims: 149
ECL
       Exemplary Claim: 1
DRWN
       7 Drawing Page(s)
LN.CNT 4376
       The present invention provides a method for the acoustic ejection of
AB
```

fluid droplets from fluid-containing reservoirs to form small volumes high throughput combinatorial experimentation for crystallization. The method is especially suited to preparing combinatorial libraries of small volume crystallization experiments for crystallizing difficult to crystallize biomacromolecules. The small volumes conserve costly and difficult to obtain macromolecules and permit an increased number of experimental crystallization conditions tested for an amount of the biomacromolecule of interest for crystallization. The time required for the experiments is greatly reduced by the scaled down experimental volumes. The invention is conducive to forming high density microarrays of small volume crystallization experiments. Acoustic detection of crystals in situ and distinction between biomacromolecular and non-biomacromolecular crystals is also taught.

```
L7
     ANSWER 8 OF 27 USPATFULL on STN
       2002:280026 USPATFULL
ΑÑ
       Information rich libraries
TI
       Schellenberger, Volker, Palo Alto, CA, UNITED STATES
IN
       Naki, Donald P., San Diego, CA, UNITED STATES
       Morrison, Thomas B., Winchester, MA, UNITED STATES
       Genencor International Inc. (U.S. corporation)
PA
       US 2002155460
                         A1
PΙ
                               20021024
       US 2001-975139
ΑI
                          Α1
                               20011010 (9)
       US 2000-239476P
                          20001010 (60)
PRAI
DT
       Utility
       APPLICATION
FS
       DAVID W. MAHER, McCutchen, Doyle, Brown & Enersen, LLP, Suite 1800,
LREP
       Three Embarcadero Center, San Francisco, CA, 94111
CLMN
       Number of Claims: 31
ECL
       Exemplary Claim: 1
DRWN
       2 Drawing Page(s)
LN.CNT 3172
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Methods of creating libraries of biological polymers are provided. The
```

construction of a library employs a probability matrix for a reference sequence, and a constraint vector for which is applied to the probability matrix to produce a substitution scheme. The substitution scheme is then used to generate a library comprising substitutions recommended by the substitution scheme. The library members, or host cells comprising and/or expressing them, can be screened for desired changes in a property of interest in the biological polymers in the library.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
L7
     ANSWER 9 OF 27 USPATFULL on STN
AN
       2002:272801 USPATFULL
TI
       Compositions and methods for the therapy and diagnosis of colon cancer
IN
       Stolk, John A., Bothell, WA, UNITED STATES
       Xu, Jiangchun, Bellevue, WA, UNITED STATES
       Chenault, Ruth A., Seattle, WA, UNITED STATES
       Meagher, Madeleine Joy, Seattle, WA, UNITED STATES
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PA
PΙ
       US 2002150922
                         A1
                               20021017
       US 2001-998598
                               20011116 (9)
AΤ
                          A1
       US 2001-304037P
                          20010710 (60)
PRAI
       US 2001-279670P
                           20010328 (60)
       US 2001-267011P
                           20010206 (60)
       US 2000-252222P
                           20001120 (60)
DT
       Utility
FS
       APPLICATION
LREP
       SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,
       SEATTLE, WA, 98104-7092
       Number of Claims: 17
CLMN
ECL
       Exemplary Claim: 1
       No Drawings
DRWN
LN.CNT 9233
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Compositions and methods for the therapy and diagnosis of cancer,
       particularly colon cancer, are disclosed. Illustrative compositions
       comprise one or more colon tumor polypeptides, immunogenic portions
       thereof, polynucleotides that encode such polypeptides, antigen
       presenting cell that expresses such polypeptides, and T cells that are
       specific for cells expressing such polypeptides. The disclosed
       compositions are useful, for example, in the diagnosis, prevention
       and/or treatment of diseases, particularly colon cancer.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 10 OF 27 USPATFULL on STN
AN
       2002:243051 USPATFULL
ΤI
       Compositions and methods for the therapy and diagnosis of ovarian cancer
IN
      Algate, Paul A., Issaquah, WA, UNITED STATES
       Jones, Robert, Seattle, WA, UNITED STATES
      Harlocker, Susan L., Seattle, WA, UNITED STATES
PA
       Corixa Corporation, Seattle, WA, UNITED STATES, 98104 (U.S. corporation)
PΙ
       US 2002132237
                               20020919
                        A1
ΑI
      US 2001-867701
                         A1
                               20010529 (9)
PRAI
      US 2000-207484P
                          20000526 (60)
DT
      Utility
FS
      APPLICATION
```

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC, 701 FIFTH AVE, SUITE 6300,

ECL Exemplary Claim: 1 DRWN No Drawings

SEATTLE, WA, 98104-7092

Number of Claims: 11

LREP

CLMN

CLMN

ECL

#### 09567863 LN.CNT 25718 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Compositions and methods for the therapy and diagnosis of cancer, ABparticularly ovarian cancer, are disclosed. Illustrative compositions comprise one or more ovarian tumor polypeptides, immunogenic portions thereof, polynucleotides that encode such polypeptides, antigen presenting cell that expresses such polypeptides, and T cells that are specific for cells expressing such polypeptides. The disclosed compositions are useful, for example, in the diagnosis, prevention and/or treatment of diseases, particularly ovarian cancer. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L7 ANSWER 11 OF 27 USPATFULL on STN 2002:236261 USPATFULL ΑN ΤI Charge tags and the separation of nucleic acid molecules IN Lyamichev, Victor, Madison, WI, UNITED STATES Skrzpczynski, Zbigniew, Verona, WI, UNITED STATES Allawi, Hatim T., Madison, WI, UNITED STATES Wayland, Sarah R., Madison, WI, UNITED STATES Takova, Tsetska, Madison, WI, UNITED STATES Neri, Bruce P., Madison, WI, UNITED STATES Third Wave Technologies, Inc. (U.S. corporation) PA $_{ m PI}$ US 2002128465 A1 20020912 AΙ US 2001-777430 A1 20010206 (9) Continuation-in-part of Ser. No. US 1999-333145, filed on 14 Jun 1999, RLI PENDING Continuation-in-part of Ser. No. US 1996-682853, filed on 12 Jul 1996, GRANTED, Pat. No. US 6001567 DT Utility FS APPLICATION LREP MEDLEN & CARROLL, LLP, 101 HOWARD STREET, SUITE 350, SAN FRANCISCO, CA,

DRWN 46 Drawing Page(s) LN.CNT 5163 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Number of Claims: 86

Exemplary Claim: 1

The present invention relates to novel phosphoramidites, including positive and neutrally charged compounds. The present invention also provides charge tags for attachment to materials including solid supports and nucleic acids, wherein the charge tags increase or decrease the net charge of the material. The present invention further provides methods for separating and characterizing molecules based on the charge differentials between modified and unmodified materials.

```
L7
     ANSWER 12 OF 27 USPATFULL on STN
AN
       2002:178749 USPATFULL
TI
       Device and method for tracking conditions in an assay
IN
       Ellson, Richard N., Palo Alto, CA, UNITED STATES
       Mutz, Mitchell W., Palo Alto, CA, UNITED STATES
       Harris, David L., Mountain View, CA, UNITED STATES
PΙ
       US 2002094537
                               20020718
                          A1
AΙ
       US 2001-40925
                               20011228 (10)
                          A1
RLI
       Continuation-in-part of Ser. No. US 2000-751231, filed on 29 Dec 2000,
       PENDING
DT
       Utility
       APPLICATION
FS
       REED & ASSOCIATES, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025
LREP
CLMN
       Number of Claims: 82
```

DT

FS

LREP

Utility

APPLICATION

Exemplary Claim: 1 DRWN 6 Drawing Page(s) LN.CNT 1642 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The invention provides a device comprising a substrate having a plurality of different molecular probes attached to a surface thereof and an integrated indicator that exhibits a response when exposed to a condition to which the substrate may be exposed. Each different molecular probe is selected to interact with a different corresponding target, and the indicator response is detectable after removing the indicator from the condition. Alternatively, a substrate is provided having a plurality of molecular probes attached to a surface thereof and a plurality of different integrated indicators. Each indicator is selected to exhibit a response when exposed to one of a plurality of conditions to which the substrate may be exposed. The inventive devices are typically used for biomolecular, or more specifically, nucleotidic assays. The invention also provides for various apparatuses and methods for assaying a sample using the inventive devices. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L7 ANSWER 13 OF 27 USPATFULL on STN AN 2002:164678 USPATFULL ΤI 26583, a novel serine/threonine phosphatase and uses therefor Meyers, Rachel A., Newton, MA, UNITED STATES TN PΙ US 2002086296 20020704 A1 US 2001-801267 20010306 (9) ΑI A1 PRAI US 2000-187454P 20000307 (60) DТ Utility APPLICATION FS LOUIS MYERS, FISH & RICHARDSON P.C., 225 Franklin Street, Boston, MA, LREP 02110-2804 Number of Claims: 36 CLMN ECL Exemplary Claim: 1 DRWN 6 Drawing Page(s) LN.CNT 5110 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The invention provides isolated nucleic acids molecules, designated AΒ 26583 nucleic acid molecules, which encode novel serine/threonine phosphatase family members. The invention also provides antisense nucleic acid molecules, recombinant expression vectors containing 26583 nucleic acid molecules, host cells into which the expression vectors have been introduced, and nonhuman transgenic animals in which a 26583 gene has been introduced or disrupted. The invention still further provides isolated 26583 proteins, fusion proteins, antigenic peptides and anti-26583 antibodies. Diagnostic methods utilizing compositions of the invention are also provided. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 14 OF 27 USPATFULL on STN L7 2002:164676 USPATFULL AN TT Device and method for tracking conditions in an assay Ellson, Richard N., Palo Alto, CA, UNITED STATES TN Mutz, Mitchell W., Palo Alto, CA, UNITED STATES Harris, David L., Mountain View, CA, UNITED STATES PΙ US 2002086294 **A**1 20020704 US 2000-751231 ΑI A1 20001229 (9)

REED & ASSOCIATES, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025

CLMN Number of Claims: 80 Exemplary Claim: 1 ECL 6 Drawing Page(s) DRWN

LN.CNT 1439

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

The invention provides a device comprising a substrate having a plurality of different molecular probes attached to a surface thereof and an integrated indicator that exhibits a response when exposed to a condition to which the substrate may be exposed. Each different molecular probe is selected to interact with a different corresponding target, and the indicator response is detectable after removing the indicator from the condition. Alternatively, a substrate is provided having a plurality of molecular probes attached to a surface thereof and a plurality of different integrated indicators. Each indicator is selected to exhibit a response when exposed to one of a plurality of conditions to which the substrate may be exposed. The inventive devices are typically used for biomolecular, or more specifically, nucleotidic assays. The invention also provides for various apparatuses and methods for assaying a sample using the inventive devices.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 15 OF 27 USPATFULL on STN L7

2002:157099 USPATFULL AΝ

32621, novel human phospholipid scramblase-like molecules and uses TI thereof

Glucksmann, Maria Alexandra, Lexington, MA, UNITED STATES ΤN

PΤ US 2002081698 A1 20020627

A1 20010226 (9)

ΑI US 2001-795038 US 2000-186234P 20000229 (60) PRAI

DTUtility

APPLICATION FS

ALSTON & BIRD LLP, BANK OF AMERICA PLAZA, 101 SOUTH TRYON STREET, SUITE LREP 4000, CHARLOTTE, NC, 28280-4000

Number of Claims: 22 CLMN Exemplary Claim: 1 ECL DRWN 8 Drawing Page(s)

LN.CNT 4168

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Novel human phospholipid scramblase-like polypeptides, proteins, and AR nucleic acid molecules are disclosed. In addition to isolated, full-length human phospholipid scramblase-like proteins, the invention further provides isolated human phospholipid scramblase-like fusion proteins, antigenic peptides, and anti-human phospholipid scramblase-like antibodies. The invention also provides human phospholipid scramblase-like nucleic acid molecules, recombinant expression vectors containing a nucleic acid molecule of the invention, host cells into which the expression vectors have been introduced, and nonhuman transgenic animals in which a human phospholipid scramblase-like gene has been introduced or disrupted. Diagnostic, screening, and therapeutic methods utilizing compositions of the invention are also provided.

#### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 16 OF 27 USPATFULL on STN

2002:119278 USPATFULL AN

Focused acoustic energy in the preparation and screening of TIcombinatorial libraries

Mutz, Mitchell W., Palo Alto, CA, UNITED STATES TN Ellson, Richard N., Palo Alto, CA, UNITED STATES

09567863 US 2002061258 20020523 PΙ A1 ΑI US 2000-727392 **A**1 20001129 (9) Continuation-in-part of Ser. No. US 2000-669996, filed on 25 Sep 2000, RLI PENDING DT Utility FS APPLICATION Ofer I. Matalon, REED & ASSOCIATES, 3282 Alpine Road, Portola Valley, LREP CA, 94028 CLMN Number of Claims: 36 ECL Exemplary Claim: 1 DRWN 5 Drawing Page(s) LN.CNT 2773 CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention provides a method for the acoustic ejection of fluid droplets from each of a plurality of fluid-containing reservoirs to prepare combinatorial libraries in the form of microarrays. An acoustic ejection device is used comprised of a plurality of fluid reservoirs, an ejector for generating acoustic radiation and the acoustic radiation at a focal point near the fluid surface in each of the reservoirs, and a means for positioning the ejector in acoustically coupled relationship to each of the reservoirs. The combinatorial libraries may comprise biological or nonbiological moieties. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 17 OF 27 USPATFULL on STN L7

2002:78423 USPATFULL ΑN

Arrays of partially nonhybridizing oligonucleotides and preparation ΤI thereof using focused acoustic energy

Ellson, Richard N., Palo Alto, CA, UNITED STATES IN

PΙ US 2002042077

A1 20020411

ΑI US 2001-962731 A1 20010924 (9)

Continuation-in-part of Ser. No. US 2000-669267, filed on 25 Sep 2000, RLI PENDING

DTUtility

APPLICATION FS

REED & ASSOCIATES, 800 MENLO AVENUE, SUITE 210, MENLO PARK, CA, 94025 LREP

Number of Claims: 38 CLMN

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

LN.CNT 1133

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

Partially nonhybridizing oligonucleotides are provided that contain two ΔR or more hybridizing segments, with any two hybridizing segments separated by a nonhybridizing spacer segment, i.e., a nucleotidic or nonnucleotidic segment that has little or no likelihood of binding to an oligonucleotide sequence found in nature. Oligonucleotide arrays are also provided in which at least one of the oligonucleotides of the array is a partially nonhybridizing oligonucleotide. The partially nonhybridizing oligonucleotides serve as multifunctional probes wherein each hybridizing segment of a single partially nonhybridizing oligonucleotide serves as an individual probe. Also provided are methods for preparing and using the partially nonhybridizing oligonucleotides and arrays formed therewith. A particularly preferred method of array fabrication involves the use of focused acoustic energy.

### CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7ANSWER 18 OF 27 USPATFULL on STN

ΑN 2002:317309 USPATFULL

TI 32670, novel human phosphatidylserine synthase-like molecules and uses thereof

```
Meyers, Rachel, Newton, MA, United States
IN
       Millennium Pharmaceuticals, Inc., Cambridge, MA, United States (U.S.
PΑ
       corporation)
PΙ
       US 6489152
                          B1
                               20021203
       US 2001-790838
                               20010222 (9)
AΙ
PRAI
       US 2000-185946P
                           20000229 (60)
DT
       Utility
FS
       GRANTED
       Primary Examiner: Achutamurthy, Ponnathapu; Assistant Examiner: Pak,
EXNAM
LREP
       Alston & Bird LLP
CLMN
       Number of Claims: 6
ECL
       Exemplary Claim: 1
DRWN
       4 Drawing Figure(s); 4 Drawing Page(s)
LN.CNT 3969
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       Novel human phosphatidylserine synthase-like polypeptides, proteins, and
       nucleic acid molecules are disclosed. In addition to isolated,
       full-length human phosphatidylserine synthase-like proteins, the
       invention further provides isolated human phosphatidylserine
       synthase-like fusion proteins, antigenic peptides, and anti-human
       phosphatidylserine synthase-like antibodies. The invention also provides
       human phosphatidylserine synthase-like nucleic acid molecules,
       recombinant expression vectors containing a nucleic acid molecule of the
       invention, host cells into which the expression vectors have been
       introduced, and nonhuman transgenic animals in which a human
       phosphatidylserine synthase-like gene has been introduced or disrupted.
       Diagnostic, screening, and therapeutic methods utilizing compositions of
       the invention are also provided.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 19 OF 27 USPATFULL on STN
L7
AN
       2001:170870 USPATFULL
TI
       Reduction of nonspecific hybridization by using novel base-pairing
       schemes
IN
       Collins, Mark L., Walnut Creek, CA, United States
       Horn, Thomas, Berkeley, CA, United States
       Sheridan, Patrick J., San Leandro, CA, United States
       Warner, Brian D., Martinez, CA, United States
       Urdea, Michael S., Alamo, CA, United States
                               20011004
PΙ
       US 2001026918
                          A1
ΑI
       US 2000-752213
                          A1
                               20001228 (9)
RLI
       Division of Ser. No. US 1998-115566, filed on 14 Jul 1998, GRANTED, Pat.
       No. US 6232462 Continuation of Ser. No. US 1997-794153, filed on 3 Feb
       1997, GRANTED, Pat. No. US 5780610 Continuation of Ser. No. US
       1995-435547, filed on 5 May 1995, ABANDONED Continuation of Ser. No. US
       1994-298073, filed on 30 Aug 1994, GRANTED, Pat. No. US 5681702
DT
       Utility
FS
       APPLICATION
LREP
       Dianne E. Reed, REED & ASSOCIATES, 3282 Alpine Road, Portola Valley, CA,
       94028
CLMN
       Number of Claims: 27
ECL
       Exemplary Claim: 1
DRWN
       3 Drawing Page(s)
LN.CNT 1779
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Methods are provided for substantially reducing background signals
       encountered in nucleic acid hybridization assays. The method is premised
       on the elimination or significant reduction of the phenomenon of
       nonspecific hybridization, so as to provide a detectable signal which is
```

produced only in the presence the target polynucleotide of interest. In

addition, a novel method for the chemical synthesis of isoguanosine or 2'-deoxy-isoguanosine is provided. The invention also has applications in antisense and aptamer therapeutics and drug discovery.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

```
ANSWER 20 OF 27 USPATFULL on STN
L7
AN
       2001:119139 USPATFULL
       OLIGONUCLEOTIDE PROBES BEARING QUENCHABLE FLUORESCENT LABELS, AND
TI
       METHODS OF USE THEREOF
       HORN, THOMAS, BERKELEY, CA, United States
TN
       SCHROEDER, HARTMUT R., FRANKLIN, MA, United States
       WARNER, BRIAN D., MARTINEZ, CA, United States
       FISS, ELLEN, ALBANY, CA, United States
       SELLS, TODD, BELLINGHAM, MA, United States
       LAW, SAY-JONG, WESTWOOD, MA, United States
       US 2001009760
                          A1
PΙ
                               20010726
       US 6465175
                          B2
                               20021015
       US 1998-146157
AΤ
                          A1
                               19980903 (9)
       US 1997-57810P
                          19970904 (60)
PRAT
       Utility
DT
       APPLICATION
FS
       JUITH A ROESLER, LAW & PATENTS DEPARTMENT, BAYER CORPORATION, 63 NORTH
LREP
       STREET, MEDFIELD,, MA, 02032
CLMN
       Number of Claims: 51
ECL
       Exemplary Claim: 1
       8 Drawing Page(s)
DRWN
LN.CNT 1616
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
       Methods are provided for reducing background signals encountered in
```

nucleic acid hybridization assays and other assays that involve hybridization of a labeled oligomer to its complement. The method is premised on the significant reduction of signal generation that occurs when a quenchable dye-labeled oligomer forms a hybrid complex. In

when a quenchable dye-labeled oligomer forms a hybrid complex. In addition, a method is provided for enhancing the detectable signal emitted from an amplification multimer hybridized to an oligomer probe to which a quenchable dye has been conjugated through a linker such that the emission from the dye is not quenched upon hybrid complex formation. Novel oligonucleotide probes are also provided that comprise an oligomer to which has been directly or indirectly through a linker a quenchable

dye.

```
ANSWER 21 OF 27 USPATFULL on STN
L7
AN
       2001:185049 USPATFULL
       Biological applications of quantum dots
TT
IN
       Bawendi, Moungi G., Boston, MA, United States
       Mikulec, Frederic V., La Jolla, CA, United States
       Sundar, Vikram C., Stoneham, MA, United States
       Massachusetts Institute of Technology, Cambridge, MA, United States
PA
       (U.S. corporation)
PΙ
       US 6306610
                          В1
                               20011023
       US 1999-397436
ΑI
                               19990917 (9)
       Continuation-in-part of Ser. No. US 1998-160454, filed on 24 Sep 1998
RLI
                        19980918 (60)
PRAI
       US 1998-100947P
       US 1998-101046P
                           19980918 (60)
DT
       Utility
FS
       GRANTED
EXNAM Primary Examiner: Le, Long V.; Assistant Examiner: Pham, Minh-Quan F.
LREP
       Fish & Richardson P.C.
CLMN
       Number of Claims: 57
```

ECL Exemplary Claim: 1 DRWN 10 Drawing Figure(s); 9 Drawing Page(s) CAS INDEXING IS AVAILABLE FOR THIS PATENT. The present invention provides a composition comprising fluorescent AB semiconductor nanocrystals associated to a compound, wherein the nanocrystals have a characteristic spectral emission, wherein said spectral emission is tunable to a desired wavelength by controlling the size of the nanocrystal, and wherein said emission provides information about a biological state or event. CAS INDEXING IS AVAILABLE FOR THIS PATENT. L7 ANSWER 22 OF 27 USPATFULL on STN 2001:112505 USPATFULL ANΤI Compound for detecting and modulating RNA activity and gene expression Cook, Phillip Dan, Carlsbad, CA, United States TN Ecker, David J., Carlsbad, CA, United States Guinosso, Charles John, Vista, CA, United States Acevedo, Oscar Leobardo, San Diego, CA, United States Kawasaki, Andrew, Oceanside, CA, United States Ramasamy, Kandasamy, Laguna Hills, CA, United States PA Isis Pharmaceuticals, Inc., Carlsbad, CA, United States (U.S. corporation) PΙ US 6262241 B1 20010717 ΑI US 1995-383666 19950203 (8) RLI Continuation of Ser. No. US 1992-854634, filed on 1 Jul 1992, now abandoned Continuation-in-part of Ser. No. US 463358, now abandoned Continuation-in-part of Ser. No. US 1990-566977, filed on 13 Aug 1990, now abandoned DTUtility GRANTED FS EXNAM Primary Examiner: Marschel, Ardin H. Woodcock Washburn Kurtz Mackiewicz & Norris LLP LREP CLMN Number of Claims: 29 ECL Exemplary Claim: 25 No Drawings DRWN LN.CNT 5473 CAS INDEXING IS AVAILABLE FOR THIS PATENT. AB Compositions and methods for modulating the activity of RNA and DNA are disclosed. In accordance with preferred embodiments, antisense compositions are prepared comprising targeting and reactive portions. Reactive portions which act, alternatively, through phosphorodiester bond cleavage, through backbone sugar bond cleavage or through base modification are preferrably employed. Groups which improve the pharmacodynamic and pharmacokinetic properties of the oligonucleotides are also useful in accordance with certain embodiments of this invention. Delivery of the reactive or non-reactive functionalities into the minor groove formed by the hybridization of the composition with the target RNA is also preferrably accomplished. Therapeutics, diagnostics and research methods and also disclosed. Synthetic nucleosides and nucleoside fragments are also provided useful for elaboration of oligonucleotides and oligonucleotide analogs for such purposes. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 23 OF 27 USPATFULL on STN L7 AN2000:131937 USPATFULL Polycarbonate resin composition ΤI Nodera, Akio, Ichihara, Japan IN Idemitsu Petrochemical Co., Ltd., Tokyo, Japan (non-U.S. corporation) PΑ 20001003 PΤ US 6127465

ΑI

US 1997-923089

```
Utility
DT
FS
       Granted
EXNAM Primary Examiner: Lipman, Bernard
       Oblon, Spivak, McClelland, Maier & Neustadt, P.C.
LREP
CLMN
       Number of Claims: 23
       Exemplary Claim: 1
ECL
       No Drawings
DRWN
LN.CNT 955
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AΒ
       Disclosed is a polycarbonate resin composition comprising an aromatic
       polycarbonate (PC), a high-impact polystyrene resin (HIPS) and a
       non-halogen phosphate, and also talc and/or polytetrafluoroethylene
       (PTFE). Optionally, the composition may contain a core/shell-type,
       grafted, rubber-like elastic material. The composition has good flame
       retardancy and has good physical properties such as stiffness, impact
       resistance, outward appearance and flowability.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
     ANSWER 24 OF 27 USPATFULL on STN
L7
       2000:9884 USPATFULL
AN
TI
       Oligonucleotides possessing zwitterionic moieties
       Cook, Alan Frederick, Cedar Grove, NJ, United States
IN
       Genzyme Corporation, Framingham, MA, United States (U.S. corporation)
PΑ
       US 6017895
PΤ
                               20000125
       US 1992-833146
                               19920210 (7)
ΑI
DТ
       Utility
FS
       Granted
EXNAM Primary Examiner: Kunz, Gary L.
       Olstein, Elliot M., Lillie, Raymond J.
LREP
CLMN
       Number of Claims: 12
ECL
       Exemplary Claim: 1
       No Drawings
DRWN
LN.CNT 470
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB
       An oligonucleotide wherein at least one nucleotide unit includes a
       phosphonate moiety having the following structural formula: ##STR1##
       wherein X is a zwitterionic moiety. Such oligonucleotides have improved
       cellular uptake capabilities and improved resistance against nuclease
       activity.
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
L7
     ANSWER 25 OF 27 USPATFULL on STN
AN
       1998:82885 USPATFULL
TI
       Reduction of nonspecific hybridization by using novel base-pairing
       Collins, Mark L., 2991 Santos La., Apt. 301, Walnut Creek, CA, United
IN
       States 94507
       Horn, Thomas, 876 Spruce St., Berkeley, CA, United States 94707
       Sheridan, Patrick J., 2008 Horne St., San Leandro, CA, United States
       Warner, Brian D., 1034 Alhambra Ave., Martinez, CA, United States 94553
       Urdea, Michael S., 100 Bunce Meadow Rd., Alamo, CA, United States
PΙ
       US 5780610
                               19980714
       US 1997-794153
AΙ
                               19970203 (8)
RLI
       Continuation of Ser. No. US 1995-435547, filed on 5 May 1995, now
       abandoned which is a continuation of Ser. No. US 1994-298073, filed on
       30 Aug 1994, now patented, Pat. No. US 5681702
DT
       Utility
FS
       Granted
```

19970904 (8)

corporation)

US 5639595

PΤ

EXNAM Primary Examiner: Zitomer, Stephanie W.; Assistant Examiner: Fredman, Jeffrey Barovsky, Kenneth, Goldman, Kenneth M., Blackburn, Robert P. LREP Number of Claims: 7 CLMN ECL Exemplary Claim: 1 DRWN 3 Drawing Figure(s); 2 Drawing Page(s) LN.CNT 1844 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Methods are provided for substantially reducing background signals encountered in nucleic acid hybridization assays. The method is premised on the elimination or significant reduction of the phenomenon of nonspecific hybridization, so as to provide a detectable signal which is produced only in the presence the target polynucleotide of interest. In addition, a novel method for the chemical synthesis of isoguanosine or 2'-deoxy-isoquanosine is provided. The invention also has applications in antisense and aptamer therapeutics and drug discovery. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 26 OF 27 USPATFULL on STN L7 ΑN 97:99156 USPATFULL Reduction of nonspecific hybridization by using novel base-pairing TI schemes Collins, Mark L., Walnut Creek, CA, United States IN Horn, Thomas, Berkeley, CA, United States Sheridan, Patrick J., San Leandro, CA, United States Warner, Brian D., Martinez, CA, United States Urdea, Michael S., Alamo, CA, United States PA Chiron Corporation, Emeryville, CA, United States (U.S. corporation) PΙ US 5681702 19971028 US 1994-298073 19940830 (8) AΙ Utility DT FS Granted EXNAM Primary Examiner: Elliott, George G.; Assistant Examiner: Fredman, Jeffrey Reed & Associates, Goldman, Kenneth M., Blackburn, Robert P. LREP Number of Claims: 8 CLMN Exemplary Claim: 1 ECL 3 Drawing Figure(s); 2 Drawing Page(s) DRWN LN.CNT 1852 CAS INDEXING IS AVAILABLE FOR THIS PATENT. Methods are provided for substantially reducing background signals AB encountered in nucleic acid hybridization assays. The method is premised on the elimination or significant reduction of the phenomenon of nonspecific hybridization, so as to provide a detectable signal which is produced only in the presence the target polynucleotide of interest. In addition, a novel method for the chemical synthesis of isoguanosine or 2'-deoxy-isoguanosine is provided. The invention also has applications in antisense and aptamer therapeutics and drug discovery. CAS INDEXING IS AVAILABLE FOR THIS PATENT. ANSWER 27 OF 27 USPATFULL on STN L7 97:51849 USPATFULL AN ΤI Identification of novel drugs and reagents Mirabelli, Christopher K., Dover, MA, United States TN Ecker, David J., Leucadia, CA, United States Vickers, Timothy A., Oceanside, CA, United States Robertson, Debra L., Del Mar, CA, United States Isis Phamaceuticals, Inc., Carlsbad, CA, United States (U.S. PA

19970617

AI US 1993-161281 19931202 (8)

RLI Continuation-in-part of Ser. No. US 1990-517240, filed on 1 May 1990,

now abandoned

DT Utility FS Granted

EXNAM Primary Examiner: Chambers, Jasemine C.; Assistant Examiner: Priebe,

Scott D.

LREP Woodcock Washburn Kurtz Mackiewicz & Norris

CLMN Number of Claims: 22 ECL Exemplary Claim: 1

DRWN 5 Drawing Figure(s); 5 Drawing Page(s)

LN.CNT 1106

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods for identifying oligonucleotides having a desired activity in vivo are disclosed. In accordance with preferred embodiments, oligonucleotides capable of conferring a desired phenotype are identified. Therapeutic, diagnostic and research methods and compositions employing such oligonucleotides are provided. Prior knowledge of the sequence or structure of a target molecule is generally

not required.